

TITLE OF INVENTION  
VESSELS FOR MULTICOMPONENT PRODUCTS

SPECIFICATION

BACKGROUND OF THE INVENTION

FIELD OF INVENTION

The Invention ~~concerns~~ refers to containers ~~utilizing~~ in which there can be stored several ~~components~~, components different in structure and/or in their aggregative state, mixed immediately before ~~consumption~~ use to be preserved for a long period of time and to create the effect of ~~freshly-mixed-prepared food stuffs~~ products, healthcare products, cosmetics, chemical agents, etc.

PREVIOUS LEVEL OF ENGINEERING

Different types of the design of ~~reservoirs-vessels~~ intended for storage of various substances and their mixtures in given proportions are widely known in science and ~~engineering~~ technology.

Thus, for example, it is known a device of a bottle cover for ~~dosed-out~~ dosed introduction of liquid or solid substances into a liquid (US Patent No. ~~Patent US № 6561232; MHK-B65B~~ IPC B65B 03/04; published 13.05.2003). It ~~consists~~ consisting of a container ~~for the for~~ for a basic component, a cover ~~with the~~ with a chamber filled with a substance under pressure, one or more tubular containers filled with a liquid or solid introduced component. ~~The, the~~ the device is also ~~supplied~~ provided with a disrupting element. The above-mentioned device uses a complex multistage system of containers, put into action after the chamber in the cover is depressurized, and the working volume of the introduced component is limited by the construction ~~of a of the~~ of the tubular container.

It is also ~~known~~ known is a device ~~of the of~~ of a separate container (Patent-US № ~~US Patent No. 3856138; MHK-B65D81/32C~~ IPC B65D81/32C); published in 1974). The device is a ~~reservoir~~ representing a vessel consisting of a receptacle and a container, ~~which are laid placed~~ concentrically to each other and are and sealed with a bottom plug of the receptacle. The cover ~~has a serewedis~~ provided with a threaded joint. The container is structurally designed ~~with the~~ with an open bottom. ~~When a cover is being removed, Removal of the cover results in that the~~

container, ~~connected to it, connected thereto~~ leaves the sealed joint with the bottom plug, ~~plug~~, which ~~in turn results in mixing up the~~ of the components from the container and the receptacle.

This device can be used only if the container is removed from the receptacle. ~~Thus, thus, laying out~~ arrangement of the container along ~~all the~~ the height of the receptacle does not ~~make it possible allow~~ to mix the components at the moment of putting the device into operation.

From the technical point of view, the closest prior art to the present invention is the device for mixing ~~up fluid and liquid~~ fluids and liquids (Patent RU №RU-Patent No. 2146641; МПК-B65D81/32IPC B65D81/32; published 29.07.1996) ~~is the closest to the above-mentioned device. It was~~ chosen as the prototype and it consists, consisting of the first a receptacle for a liquid with an entry opening, closed with a cover and the second receptacle for a fluid, fitted arranged into the upper part of the first receptacle, the external housing of the second receptacle with a breaking element in the form a pin, the connecting pipe and the drain pipe submerged into a liquid. The specified device operates as follows: initially it is necessary to wind up the cover till it stops, the second receptacle moves ~~downward~~ downwardly, the pin breaks a membrane of the second receptacle. ~~Then, then the cover must be turned turn in the opposite direction~~ the cover right about so that, the second receptacle moves upwards. ~~Under pressure,~~ the fluid from the second receptacle ~~goes~~ moves under pressure through the system of channels into the receptacle with a liquid ~~through the system of channels. After that, afterwards it is necessary to~~ remove the empty second receptacle and the external housing ~~with a~~ with the breaking element. The above-mentioned device is not widely used as it has limited functional capabilities and ~~rather a rather complex design~~ construction. The device can be used only after performing several sequential operations; ~~however, thereby,~~ the process of mixing up is irreversible, i.e. the ~~consumer user~~ does not have an have the opportunity to manage the process of mixing ~~up the~~ components at his own discretion.

## SUMMARY OF THE INVENTION

5 The offered invention aims at ~~developing~~ the reservoir for the aim of the proposed invention is the development of a vessel for multicomponent products, providing the ~~for~~ reliability of its ~~design~~ construction; easy and secure  
10 depressurization of the container with an introduced component; reduction of actions to ~~perform~~ be performed ~~to activate the process of mixing up mixing process~~; ~~removal~~ release of the end-product without the removal of the container; creation of the ~~new~~ functional capabilities, allowing to manage the process of mixing up the components. Achievement of the set aims will provide ~~the for an~~  
15 easy use of the device, including the possibility to ~~model~~ modify parameters of the end product just before using it for its intended purpose.

~~\_\_\_\_\_~~ The set aim is achieved ~~as follows: the reservoir in that the vessel~~ for multicomponent products contains a receptacle ~~for the~~ for a basic component, a ~~dismountable~~ cover having a plug connection with the receptacle, a container for  
20 the introduced component, fitted into arranged in the upper part of the receptacle, ~~It also has provided with~~ at least, least one channel for the output of the end product; ~~additionally the container is provided with at least one opening; There is, at least, one hole in the container; additionally there provided~~ is a valve closing the hole opening of the container. ~~The; the~~ the container and the valve are connected  
25 ~~with the possibility to be displaced~~ displaceable ~~one from the~~ relative to each other ~~along the~~ along guide members. ~~The; the~~ the cover can interact with the container and the valve.

The offered ~~reservoir~~ proposed vessel differs from the prototype in following: ~~that it contains, contains~~ at least, least one channel for the output of the  
30 end product. ~~There is; the container is provided with at least, least one hole in the container opening; additionally there provided~~ is a valve closing the hole opening of the container. ~~The; the~~ the container and the valve are connected ~~with the possibility to be displaced from~~ displaceable relative to each other along the guide members. The cover can be dismantled from the container ~~or the valve; it and it~~ can also ~~can~~ be fixedly connected to them.

5        ~~Presence of, at least, one hole~~Provision of at least one opening in the container allows easy and safe depressurization of the container, which does not demand ~~require~~ breaking of a membrane. Additional installation of the valve on the container, which closes the ~~hole opening~~ of the container, ~~provides~~provides for reliability of the ~~design~~construction, reduction of actions necessary to activate the ~~process of mixing up~~mixing process. ~~Presence of, at least,~~Provision of at least one channel for the ~~output removal~~ of the end-product provides ~~makes it possible to take out for release of~~ the end-product without the removal of the container. Working ~~out of a~~Provision of the cover with ~~the possibility of~~ interaction~~interacting~~ with the container or the valve and also ~~the connection of~~ the container and the valve displaceable relative to with ~~the possibility to be displaced from each other along the guide members~~ creates~~provides for~~ some new functional capabilities, allowing ~~the possibility to~~ manage the process of mixing ~~up the~~ components and to ~~model~~modify parameters of the end product just before using it for its intended purpose.

~~The detachable~~Detachable connection of the cover with ~~the~~ receptacle can be made in the form of a screwed connection, a ~~retention pin~~clamp, etc.

20        The container can be located inside the upper part of ~~container~~receptacle, and the detachable connection with the cover can be ~~fitted onto~~arranged on the receptacle.

      The container can be located ~~on the outside~~ of the upper part of the receptacle, and the valve can be fitted arranged inside the container; container, the detachable connection with the cover is located arranged on the container. In case if the container is placed ~~on the outside~~ of the upper part of the receptacle, the valve can be located on the outside of the container and the detachable connection with the cover is set arranged on the valve.

30        The cover interacts with the container or the valve with its ~~internal~~inner part which can be flat or in the form of a binding element of any of the known configurations (a push bar, a toothed member, a ~~spiking~~hub, an ~~advancing~~ cam, a

retention pinclamp, a plug connector, etc.). The cover can be fixedly connected to the container or the valve, for example, by welding in the form of a one-piece construction; ~~the or the~~ cover can be set on the valve or the container using expendable fasteners or any other known ~~ways~~ methods of fixed connection.

5 The container or the valve, respectively, can be provided with the binding elements - push bars, toothed members, ~~spikingshubs~~, advancing cams, ~~retention pins, andclamps~~, plug connectors.

In case the valve is ~~set on the~~ arranged outside of the container, the cover ~~(with the help of the binding element)~~ fixes the container and the valve through ~~the binding element in position~~ a position when the valve closes the ~~hole opening~~ of the container. When removed, the cover transfers the movement to the container through the binding element.

15 In case the valve is ~~established~~ arranged inside of the container, the cover ~~(with the help of the binding element)~~ fixes the container and the valve through ~~the binding element in position~~ in a position when the valve closes the ~~hole opening~~ of the container. When the cover is removed, the movement is transferred to the valve through the binding ~~element~~ element, the displacement of the valve results in its detachment with the ~~hole opening~~ of the container.

20 Displacement of the valve and the container relative to each other ~~one from the other~~ can be carried out through the indirect action ~~of the~~ of a spring-controlled ~~unit element~~ placed between the container and the valve. As a spring element ~~Any~~ any known spring ~~group~~ or a gasket can be used, made ~~from any of any~~ plastic material, ~~can be used as a spring-controlled unit~~ P. The presence of a spring-controlled ~~the spring element~~ unit allows to facilitate the process of removal of the cover due to the ~~action of~~ unclasp ~~ing of~~ the spring-controlled ~~unit element~~. ~~Forees, Forces~~ arising at this moment, ~~thereby~~ give an additional movement to the valve, which results in detachment of the valve and the ~~hole opening~~ of the container. The spring-controlled ~~unit element~~ is preferable in case if the inner part of the cover is flat.

30 Displacement of the valve and the container relative to each other ~~one from~~

the other can be carried out through the creation of the ~~positive excess~~ pressure of one of the components. In this case when the cover is removed from the container, the valve and the container are displaced ~~one from the other~~relative to each other, opening the ~~hole~~opening of the container.

5 If the valve is ~~influenced by~~affected by the spring-controlled unit element and/or ~~positive excess~~ pressure of a component in the container, the cover fixes the container and the valve in position when the valve closes the ~~hole~~opening of the container. When the cover is removed, the spring-controlled unit element and/or ~~positive the excess pressure of a of the~~ component in the container  
10 transfer the movement to the valve, which results in displacement of the valve from the ~~hole~~opening of the container.

In case of ~~fixed of a fixed~~ connection of the valve with the cover, the cover fixes the container and the valve in ~~position a position~~position when the valve closes the ~~hole~~opening of the container. When the cover is displaced, ~~so is the valve the~~  
15 valve is displaced as well. If Additional provision of a removable cap is ~~fitted into~~in this case facilitates the use of the ~~offered~~proposed device.

The valve can be made in the form of an independent construction or as an element of the receptacle or the container.

Thus, removal or displacement of ~~a cover~~the cover sets the ~~reservoir vessel~~  
20 in the position "open"; "open", simultaneously the valve and the container are displaced ~~one from the other~~relative to each other. Displacement of the valve and the container ~~one from the other~~relative to each other results from the ~~direct~~  
mechanical effect, ~~if when~~if when the cover is connected fixedly with the valve or the container, or through the binding element, ~~if when~~if when the cover is connected to the  
25 valve or the container by a detachable connection ~~can be dismantled from the valve or the container.~~

Opening of the ~~hole of the~~ container results from the ~~necessary~~required displacement of the container and the valve ~~one from the other~~relative to each other which is carried out through the guide members.

30 The guide members can be made in the form of an independent

construction or as parts of the receptacle, the container or the valve. The guide members can have any of the known forms, for example, the form of a ring, zigzag, spiral, helical, rectilinear, etc.

5 The introduced component under the influence of its own weight and/or positive-excess pressure enters the receptacle through the hole-opening in the container enters into the receptacle and is mixed-upmixed with the basic component.

10 Positive-Excess pressure can be achieved if there is some gas, a gas in the container, for example, carbon dioxide, dioxide, in the container. Positive-Excess pressure can also be achieved if the hydraulic pressure is created due to the displacement of the valve and the container one from the other relative to each other, for example, when the valve and the container are set-placed relative to each other in accordance with the principle of the piston piston - cylinder or in case of the additional installation of blades inside the container and/or inside a part of the valve, closing the hole-opening of the container. Creation of the positive-excess  
15 pressure can also be achieved using other known ways-methods.

20 There can be one or several holes-openings in the container. At least, one hole-opening is necessary to organize-realize the process of mixing-upmixing the components. Other-holesProvision of other openings can be necessary for the technological purposes.

The introduced component can be in one of the following states: liquid, powder or granules.

25 Pinned-In order to improve the homogeneity of mixing blades can be additionally set-arranged on the parts of the container submerged into the basic component, on order to improve the homogeneity of mixing up. They allow organizing-allowing to organize the flow of liquid components when the container or the valve is displaced. The above-mentioned pinned-blades are placed on the outside part of the container and the valve.

30 The reservoir, which is being patented, vessel allows two possibilities of mixing-upmixing the components - the complete-mixing up-complete mixing

according to the formula of the manufacturer or dosed ~~mixing-up~~mixing according to the formula of the ~~consumer-user~~. The above-mentioned possibilities depend on the form and the position of the valve.

Uncontrolled complete ~~mixing-up~~mixing of the components according to the formula of the manufacturer is ~~made-carried out~~ in case if the valve opens the ~~hole-opening~~ of the container when the cover is removed.

Dosed ~~mixing-up~~mixing of the components ~~can be performed~~is carried out in case if the valve closes the ~~hole-opening~~ of the container when the cover is removed. In ~~this case,~~case of the latter, having chosen the necessary ~~portion~~amount of the introduced component, ~~you can~~one can interrupt the process of ~~mixing-up~~mixing the components at any time by the removal the cover from the ~~reservoir-vessel~~. The valve closes the ~~hole opening-of-the-in the body of the~~ container. The ~~portion-amount~~ of the introduced component depends on the period of time during which the ~~reservoir-vessel~~ is in the position "open". ~~Thus, the consumer can model~~This allows the user to modify parameters of the end product just before using it for its intended purpose.

In case ~~if the cover~~the cover is ~~detachably~~ connected to the container or to the valve ~~by detachable connection,~~ removal of the cover results in termination of interaction of ~~a cover~~the cover with the container or the valve; ~~the container rests in the reservoir-valve, the container remains in the vessel.~~

If the cover is fixedly connected to the container or to the valve, the cover can remain on the ~~reservoir-vessel~~ and the ~~evacuating-release~~ of the end product is carried out through the channel intended for the output of the end product through the ~~hole-opening~~ in the cover with the removable cap, ~~thus, thereby~~ the container remains in the ~~reservoir-vessel~~.

The end-product, product prepared during the ~~mixing-up,~~mixing is ~~taken out~~released from the ~~reservoir-vessel~~ through the channel. The channel can be placed between the receptacle and the container or it can be placed inside the container or inside the valve.

In order to facilitate the ~~process of taking out~~release of the end product from the



bottom of the receptacle, the reservoir-vessel in question can additionally ~~have be~~ provided with a tube. In this case the end-product passes through this tube, which reaches the bottom part of the receptacle, ~~and, then, it and~~ passes into the channel for the output of the end product.

5 Other variants of ~~using the invention, which is being patented, are as follows:~~ realization of the patented invention are such that the end-product can pass through the outlet channel into an additional ~~hole-opening arranged in the cover or through the removable cap of a~~ removable cap arranged on the cover.

10 Moreover, in order to provide for additional facilitation of the use of the patented vessel the upper part of the container or the valve can be made in the form of a neck ~~which can be slid out from the receptacle; that facilitates still further the use of the reservoir-sliding neck.~~

If the container ~~consists from~~ is carried out with several chambers with introduced components, it is possible to ~~make~~ produce more complex  
15 multicomponent products.

The above-mentioned ~~versions-variants~~ of the offered engineering proposed technical solution have ~~one whole~~ are connected by a common functional purpose. ~~They present the purpose and represent particular ways of making embodiments of the valve, the container, the cover, of the guide members and their interactions in order to achieve the integrated-a common technical result, that is to provide the result - providing for displacement of the valve and the container one from the other and therefore, to put the reservoir relative to each other and putting the vessel into operating condition which activates in order to activate the process of mixing up mixing the components.~~

20 The best ways of implementation of the invention

~~The particular versions of the reservoir~~ Particular variants of the proposed vessel for multicomponent ~~products, which is being patented;~~ products are described below with references to the enclosed ~~illustrations-drawings.~~

~~The reservoir-vessel,~~ which is being patented, guarantees the reliability of  
30 its design; easy and secure depressurization of the container with an introduced

component; reduction of actions to perform to activate the process of mixing up, to reduce the production cost, the possibility to manage the process of mixing up the components depending on the consumer request.

#### BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS

Fig. 1: ~~the design of the reservoir in the~~ Fig. 1 shows the construction of the proposed vessel in cross-sectional view ~~as in example 1; the~~, wherein the valve is placed on the external part of the container, ~~guide the guide members are made in the ring form form of a ring.~~

Fig. 2: ~~the design of the reservoir in the~~ Fig. 2 shows the construction of the proposed vessel in cross-sectional view ~~as in example 2; according to example 2, wherein~~ the valve is placed on the internal-inner part of the container, the guide members are made in the form of zigzag.

Fig. 3: ~~the design of the reservoir in the~~ Fig. 3 shows the construction of the vessel in cross-sectional view ~~as in example 3; according to example 3, wherein~~ the valve is fixedly connected with ~~cover by fixed connection, the to the cover, the cover is provided with a~~ removable cap ~~is fitted into the cover, cap,~~ the guide members are formed by walls of the container ~~and the end of the valve.~~

Fig. 4: ~~the design of the reservoir in the~~ Fig. 4 shows the construction of the vessel in cross-sectional view ~~as in example 4; according to example 4, wherein~~ the container is an element of the receptacle, the upper part of the valve is made in the form of a tube.

Fig. 5: ~~the design of the reservoir in the~~ Fig. 5 shows the construction of the vessel in cross-sectional view ~~as in example 5; according to example 5, wherein~~ hydraulic pressure, pressure is used resulting from of the displacement of the valve and the container ~~one from the other, is used relative to each other.~~

Fig. 6: ~~the design of the declared reservoir in the~~ Fig. 6 shows the construction of the declared vessel in cross-sectional view ~~as in example 6; according to example 6, wherein~~ displacement of the container relative to the valve ~~and the container one from the other results from the indirect action of~~ pressure of the introduced component.

~~Fig. 7: the design of the reservoir in the~~ Fig. 7 shows the construction of the vessel in cross-sectional view as ~~in~~ according to example 7 with the channel for the output of the end product through the valve; ~~the channel is connected~~ valve, connection of the channel with a tube ~~which reaches~~ reaching the bottom part of the receptacle, installation ~~is made of a spring~~ between the container and the valve of a spring group valve.

~~Fig. 8: the design of the declared reservoir in the~~ Fig. 8 shows the construction of the proposed vessel in cross-sectional view as ~~in~~ example 8; according to example 8, ~~wherein~~ the channel ~~intended for~~ for the output of the end product is inside the container.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

##### Example № 1. No. 1.

Fig. 1 of the ~~reservoir~~ proposed vessel shows the following elements: the receptacle ~~receptacle~~ (the upper part) - 1 ~~with the~~ with a basic component - 2; the container ~~container~~ - 3 ~~with the~~ with an introduced component - 4 and carbon dioxide - 5; ~~the hole~~ opening - 6 in the container 3; ~~the valve~~ valve - 7; the channel ~~channel~~ - 8; ~~the cover~~ cover - 9; ~~the push~~ push bar - 10; the guide ~~guide~~ members - 11 in the form of ~~the ring~~ a ring.

When twisting the cover 9 with detachable ~~connection is wound~~, the ~~reservoir~~ connection, the vessel opens and the pressure in the receptacle 1 becomes ~~equal to the~~ equal to atmospheric ~~pressure~~ pressure, simultaneously the push bar 10 transfers the movement to the container 3 which displaces along the guide members 11 ~~against relative~~ to the valve 7 fixed in the upper part of the receptacle 1. The ~~reservoir-vessel~~ is set in position "open", unlinking the ~~hole~~ opening 6 of the container 3 and the valve 7. Under ~~the action of~~ the effect of the pressure of the ~~carbon~~ carbon dioxide 5 the introduced component 4 is thrown out in the receptacle 1 through the ~~hole~~ opening 6 of the container 3 and is mixed up with the basic component 2.

\_\_\_\_ If the valve 7 opens the ~~hole~~ opening 6 of the container 3 when the cover

with detachable connection 9 is dismantled, ~~there occurs a uncontrolled-an~~  
uncontrolled complete mixing upmixing of component 2 and component 4 occurs  
according to the formula of the manufacturer.  
In case if the container 3 is ~~made from~~made of transparent materials and the valve  
7 closes the hole-opening 6 of the container 3 when the cover with detachable  
connection 9 is dismantled, ~~there occurs dosed-mixing-updosed mixing~~ of the  
~~components~~components occurs. When necessary ~~portion-amount~~ of the  
introduced component 4 ~~was chosen~~is selected, the consumer-user can stop the  
~~process of mixing upmixing process~~ of the components by twisting off the cover  
with detachable connection 9 until it is detached. The container 3 and the valve 7  
close the hole-opening 6 of the container 3.  
In such a way the ~~consumer can model~~user modifies the parameters of the  
end product just before using it for its intended purpose.  
After the cover with detachable connection 9 is dismantled, the end-  
product can be freely ~~taken-out~~released through the channel 8 formed by the  
receptacle 1 and the container 3.

#### Example ~~No. 2~~No. 2.

Another ~~version-variant~~ of the ~~reservoir-proposed vessel~~ differs from the  
~~reservoir shown in example No. 1-vessel~~ according to example No. 1 in particular  
form of ~~design-realization~~ and interaction of the container and the valve. Fig. 2 of  
the ~~reservoir-proposed vessel~~ shows the following elements: receptacle (the upper  
part) - 1 with the ~~basica~~ basic component - 2; the ~~introduceed~~introduced component  
- 4; carbon dioxide - 5; the holeopening 6 of the container-20; the ~~channel~~channel  
- 8; the ~~covercover~~ with detachable connection - 9; the ~~pushpush~~ bar - 10.

This ~~version-variant~~ differs from ~~version-in Example 1~~ in the  
following: ~~variant of example No. 1 in that~~ the guide members - 22 ~~are of the~~have  
a zigzag ~~form, form, and~~ the valve-21 is ~~placed-arranged~~ on the interior-inner side  
of the container - 20 which is fixed in the upper part of the receptacle 1.

When being used, the cover with detachable connection 9 transfers the

movement through the push bar 10 to the valve 21 which moves along the guide members 22 of the zigzag form and is displaced in a wave-like manner against relative to the container 20 fixed in the upper part of the receptacle 1. The reservoir-vessel is set in position "open", unlinking the hole-opening 6 of the container 20 from the valve 21.

#### Example №3.No. 3.

Fig. 3 shows a version-of-the-reservoirvariant of the vessel for multicomponent products, which differs from version-№1-invariant No. 1 in the particular form of design-and-realization and the relative position of structural-the structural elements against each- to each other. Fig. 3 ~~shows~~ shows the following elements: the receptacle-receptacle (the upper part) - 1 with the basica basic component - 2; the introduceedintroduced component - 4; the covercover - 31, made with-the-with a removable cap 33, the valvevalve - 34, fixedly connected with-the-to the cover 31 and fitted-arranged inside the container - 32, which-is-is the latter fixedly connected to the receptacle 1; the valvevalve - 35. The design construction operates similarly to the previously described versionsvariants. Its basic difference from the above-mentioned designs-variants is in-the following-that the cover with-with the detachable connection 31 is fixedly connected to the valve 34, so that when the cover 31 is twisted, the container 32 opens. When the cap-33-is-removed,removing the cap 33 the end-product is taken out-released through the channel 35 without dismounting of the cover 31.

#### Example №4.No. 4.

Fig. 4 shows the versiona variant of the reservoir-proposed vessel for multicomponent products. This version of reservoir-vessel design of contains the valve - 41, the receptacle-receptacle - 1 with-the-with a basic component - 2, the container-container - 42 which is made as an element of the receptacle - 1, the covercover - 43, the bindingbinding element - 44, made in the form of the retention pin,a clamp, the introduceedintroduced component - 4, the holeopening - 6 of the container 42, the channelchannel-8. The basic difference from the designs

in version № 1 to the variants according to variant No. 1 is that the container 42 is an element of the receptacle 1, the upper part of the valve 41 is made in the form of a neck. When removing the cover 43 is ~~dismounted~~, the binding element 44 raises the valve 41 above the receptacle 1 ~~that which~~ results in unlinking of the valve 41 and the ~~hole-opening~~ 6 of the container 42. The cover 43 is removed, and the valve 41 is fixed in the top position above the receptacle 1. After ~~mixing~~ upmixing the components the end-product is ~~taken-out~~ released through the channel 8 of the valve 41.

Example № 5, No. 5.

Fig. 5 shows the ~~version of the reservoir consisting of the following elements: variant of the vessel showing a~~ receptacle (the upper part) - 1 with the basic basic component - 2, ~~the introduced introduced~~ component - 4, the container container 50 with the ~~hole-opening~~ 6; ~~the channel channel~~ - 8; ~~the cover with cover with~~ a detachable connection - 9; ~~the push push~~ bar - 10, ~~the valve valve~~ 51, ~~the guide guide~~ members 52 made on the form of a thread; ~~in the upper the upper~~ part of the container 50 ~~there is a fabrication hole is~~ provided with a technological opening - 53. The basic difference ~~from version described in example № 1, consists in the following: there are blades 54 to the variant of example No. 1 is that~~ in the container 50 and the valve 51, 51 blades 54 are arranged, one of the blades which is connected to the valve 51, and the second is connected to the ~~internal-inner~~ part of the container 50. When the cover 9 is twisted, the valve 51 and the ~~hole-opening~~ 6 of the container 50 are ~~disconnected; disconnected~~, simultaneously the introduced component 4 ~~undergoes the action of pressure, created is set under pressure~~ by the blades 54. Under the effect of the ~~hydraulic hydraulic~~ pressure the introduced component 4 is thrown out from the container 50 at a high flow speed of a stream and is mixed up ~~with with~~ the basic component 2.

Example № 6, No. 6.

Fig. 6 shows the ~~version of the reservoir~~variant of the proposed vessel with the ~~showing a~~ receptacle (the upper part) - 1 with the ~~basica~~ basic component - 2; the ~~container~~ container - 60 with the ~~introduce~~ introduced component - 4 and carbon dioxide - 5; the ~~hole~~ opening 6 in the ~~container~~ container - 60; the ~~valve~~ valve - 61; the ~~channel~~ channel - 8; a cover with detachable connection - 9 the ~~internal~~ inner part of which is flat; the ~~push~~ push bar - 10; the ~~guide~~ guide members - 62.

The ~~design of the reservoir of this version~~The present variant of the construction of the vessel differs from the ~~one of the version № 1~~variant No. 1 in the ~~a~~ different position and the form of the ~~container 60 and~~ container 60, the ~~valve 61; the guide 61, and the guide~~ valve 61, and the guide members 62 form a part of the receptacle 1, the introduced component 4 is under pressure of ~~carbon~~ carbon dioxide 5, the push bar 10 ~~is in a~~ is represented by a flat part of the cover 9 and presses the container 60 to the valve 61. ~~When-Thus, when~~ When-Thus, when being used, the cover with detachable connection 9 ~~raises~~ raises above the receptacle 1 and through the push bar 10 reduces the influence to the container 60 which is under the ~~positive~~ excess pressure of the component 5; ~~the 5, the~~ the 5, the introduced component 4 ~~lifts~~ raises the container 60 along the guide members 62 ~~against~~ relative to the valve 61. The ~~reservoir-vessel~~ is set in position «open», unlinking the ~~hole~~ opening 6 of the container 60 and the valve 61.

#### Example № ~~7~~ No. 7.

Fig. 7 shows the ~~version of the reservoir~~variant of the proposed vessel for multicomponent products ~~which consists of the following elements: the showing;~~ receptacle (the upper part) - 1 with the ~~basica~~ basic component - 2; the ~~container~~ container 70 with the ~~introduce~~ introduced component - 4; the ~~hole~~ opening 6 of ~~the in the~~ the container-70; the ~~channel~~ channel - 8; the ~~binding~~ binding element - 10. ~~Except for the different if its form container 70 this version differs from the version № 1 in the following: - it~~ As distinct from variant No. 1 the present variant in addition to the different form of the container 70

contains the valve valve 71, the cover cover 79 with the detachable detachable connection made in the form of the retention pin, the clamp, guide members 72, the spring group spring 74, the tube tube 73 connected to their connection to a channel 8. The container 70 and the valve 71 are located above the receptacle 4; the 1, and the guide members 72 are made as a part part of the sides of the valve 71 and the container 70. The channel for the output of the end product 8 passes through the tube 73 and the valve 71. When being used, in use, through the binding element 10 the cover with detachable connection 79 transfers the movement to the valve 71 through the binding element 10. The valve 71 which under the action 71, which under the influence of the cover 79 and the spring group 74 goes moves along the guide members 72 and moves upwards against displaces upwardly relative to the container 70. The reservoir-vessel is set in position «open», unlinking the hole opening 6 of the container 70 and the valve 71.

#### Example ~~No 8~~, No. 8.

Fig. 8 shows the version of the reservoir variant of the proposed vessel for multicomponent products which consists of the following elements: the showing: a receptacle (the upper part) - 1 with the basic basic component - 2; the container 80 made with the open open upper part, the introduced an introduced component - 4; the hole opening - 6 of the container 80; the cover cover with detachable connection - 9; the push push bar - 10.

This version differs from the version ~~No 1~~ in the following: it As distinct from variant No. 1 the present variant contains contains a different in its form container 80, the valve valve 81, the guide members 82 and the guide members 82, introduced component 4 in the form of a powder. When being used, in use the cover with with the detachable connection 9 transfers the movement through the push bar 10 to the container 80 which goes moves along the guide members 82, which give provide only rotational movement, and moves against displaces relative to the valve 81. The reservoir-vessel is set in position «open», unlinking the hole opening 6 of the container 80 and the valve 81.



The above-mentioned ~~versions-variants~~ of the ~~design-construction~~ of the ~~reservoir-vessel~~ for multicomponent products operate similarly to each other. Other possible ~~designs-variants~~ of the ~~offered-reservoir~~proposed vessel are reduced to different combinations of the ~~ways~~ways of connection of the ~~container~~, ~~the container and the~~ valve, and the guide members.

#### Industrial utilizationApplicability

The use of the ~~reservoir-vessel~~ for multicomponent products will ~~make it possible to improve~~provide for improvement of the quality of such kind of ~~reservoirs~~the latter due to the ~~new~~new functional capabilities: reliability of a ~~design~~construction; easy and safe depressurization of the container with the introduced component; reduction of actions to activate the ~~process~~process of ~~mixing~~mixing process up; ~~taking out~~release of the end product without the removal of the container.

~~Besides, there appeared~~Furthermore, the appearance of the new functional capabilities ~~providing~~providing for management of the ~~process of mixing~~upmixing process of the ~~components~~components will allow the ~~consumer~~user to model parameters of the end product just before using it for its intended purpose, taking into account particular circumstances and conditions.